

Department of Environmental Protection Performance Review

Bob Hoyt, Director
November 13, 2009

CountyStat Principles

- **Require Data-Driven Performance**
- **Promote Strategic Governance**
- **Increase Government Transparency**
- **Foster a Culture of Accountability**



Agenda

- **Welcome and Introductions**
- **Performance Update**
- **Wrap-up and Follow-up Items**



Meeting Goals

- **Determine the impact of DEP work on headline measures and establish new performance expectations and goals**



Headline Measures

Water Quality

- Pollutant Load Reductions to Meet Water Quality Standards
- Index of Biological Integrity (IBI*) Score In County Watersheds

Policy and Compliance

- Average Number of Days to Resolve Incoming Complaints
- Percent Satisfied with DEP Response to Environmental Complaints
- Residential and Non-Residential Building Energy Use (*New measure*)
- **Indicator** - Air Quality Measure: Number of Air Quality Action Days in the Year

Water and Sewer Policy

- Percent Concurrence of County Council Water and Sewer Service Actions with DEP Recommendations (*New measure*)

Solid Waste

- Percentage of Total Municipal Solid Waste Recycled
- Missed Collection Complaints per Week
- Percent of Landfill Space Not Utilized
- Single-Family Solid Waste Charges



Headline Measure: Water Quality

The National Pollutant Discharge Elimination System (NPDES) MS4 Permit terms require the County to demonstrate that its impaired waterbodies with established Total Maximum Daily Loads (TMDL) are making progress towards meeting Water Quality Standards and require the County to capture stormwater from 20% of its impervious surface not treated to the maximum extent practicable.

■ Water Quality Measuring

- The following pollutant loads (causes of impairment in County waterbodies) must be reduced over time: sediment, nitrogen, phosphorus and bacteria
- Biological conditions of the watershed are measured by the Index of Biological Integrity

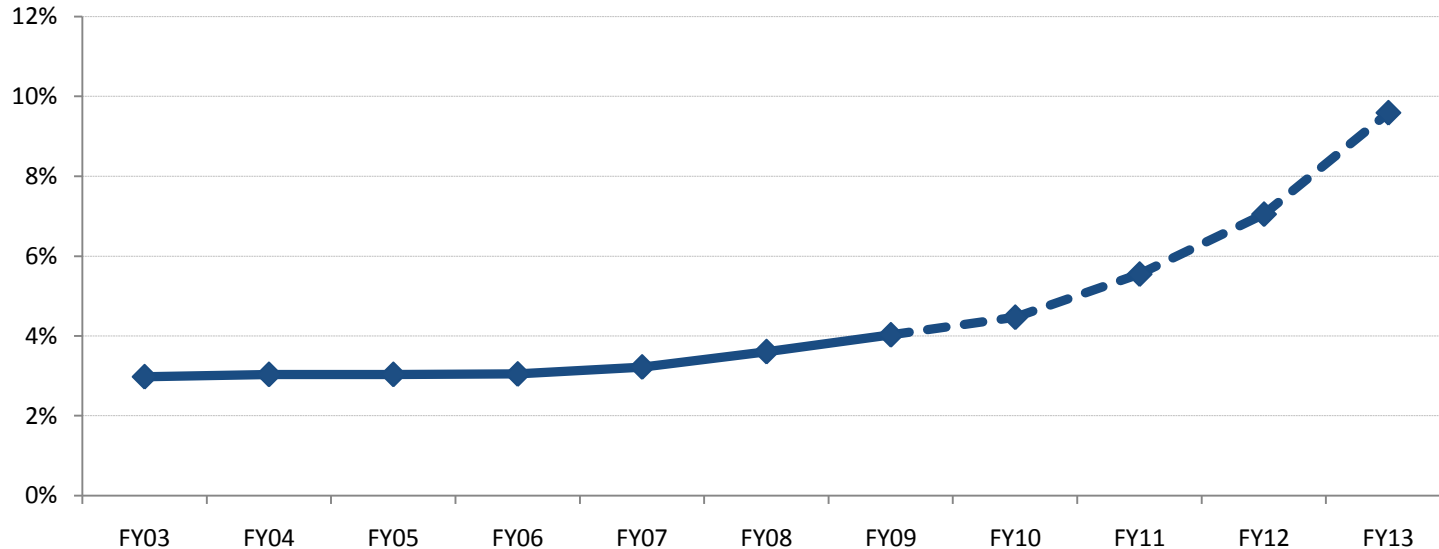
■ Methods utilized by the county to improve water quality impairments include:

- Stormwater Treatment of Impervious Surface
 - Stormwater Facility Retrofits
 - Impervious acres treated on privately-held land through the Rainscapes Program
- Stream Restoration



Performance Context: Percent of Total County Impervious Surface with Stormwater Treatment

Objective: To meet the terms of the County's third NPDES MS4 Permit which requires stormwater control for 20% of the County's impervious surfaces

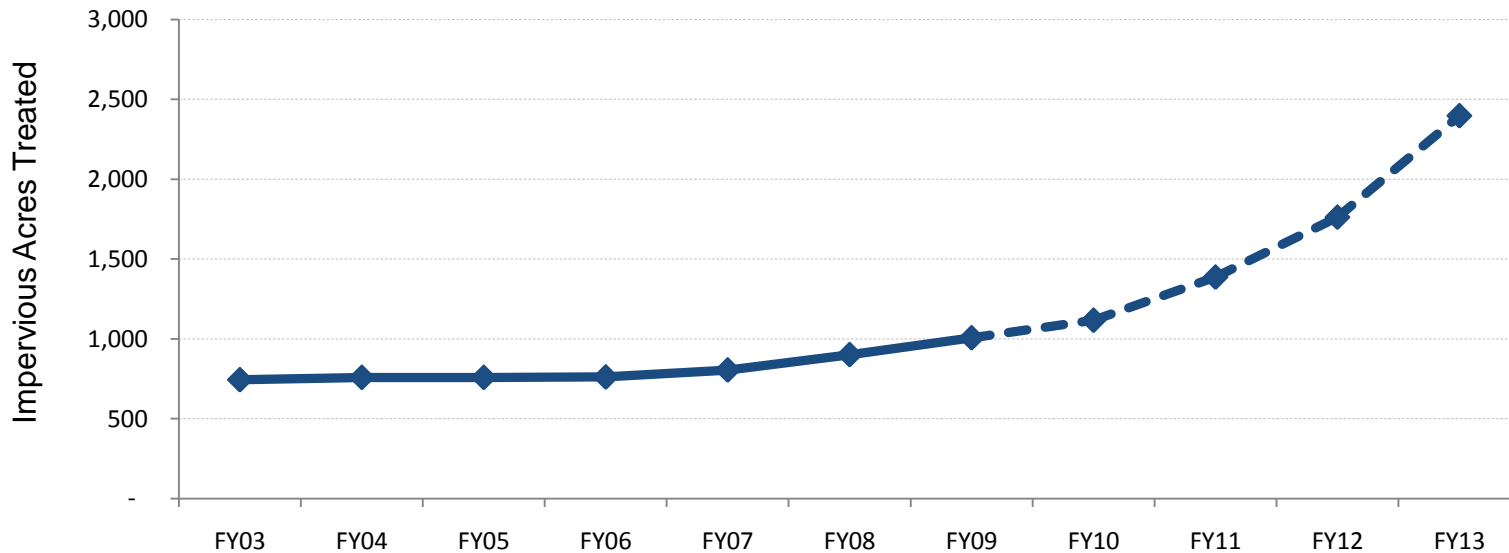


	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
% of Impervious Surface Treated	3%	3%	3%	3%	3%	4%	4%	4%	6%	7%	10%



Performance Context: Impervious Acres Treated with Stormwater Facility Retrofits

Objective: To meet the terms of the County's third NPDES MS4 Permit which requires stormwater control for 20% of the County's impervious surfaces

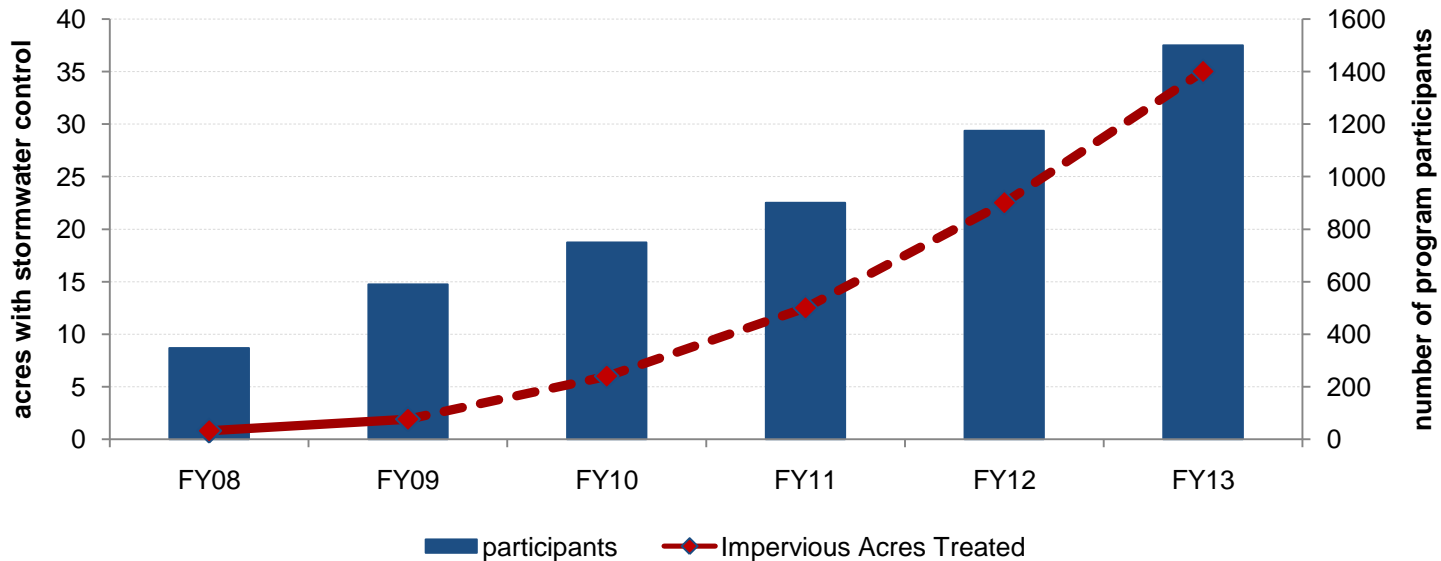


	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Impervious Acres Treated with Stormwater Facility Retrofits	745	759	759	762	806	902	1,007	1,117	1,387	1,762	2,397



Performance Context: Impervious Acres Treated on Privately-held Land through the RainScapes Program

Objective: To meet the terms of the County's third NPDES MS4 Permit which requires stormwater control for 20% of the County's impervious surfaces

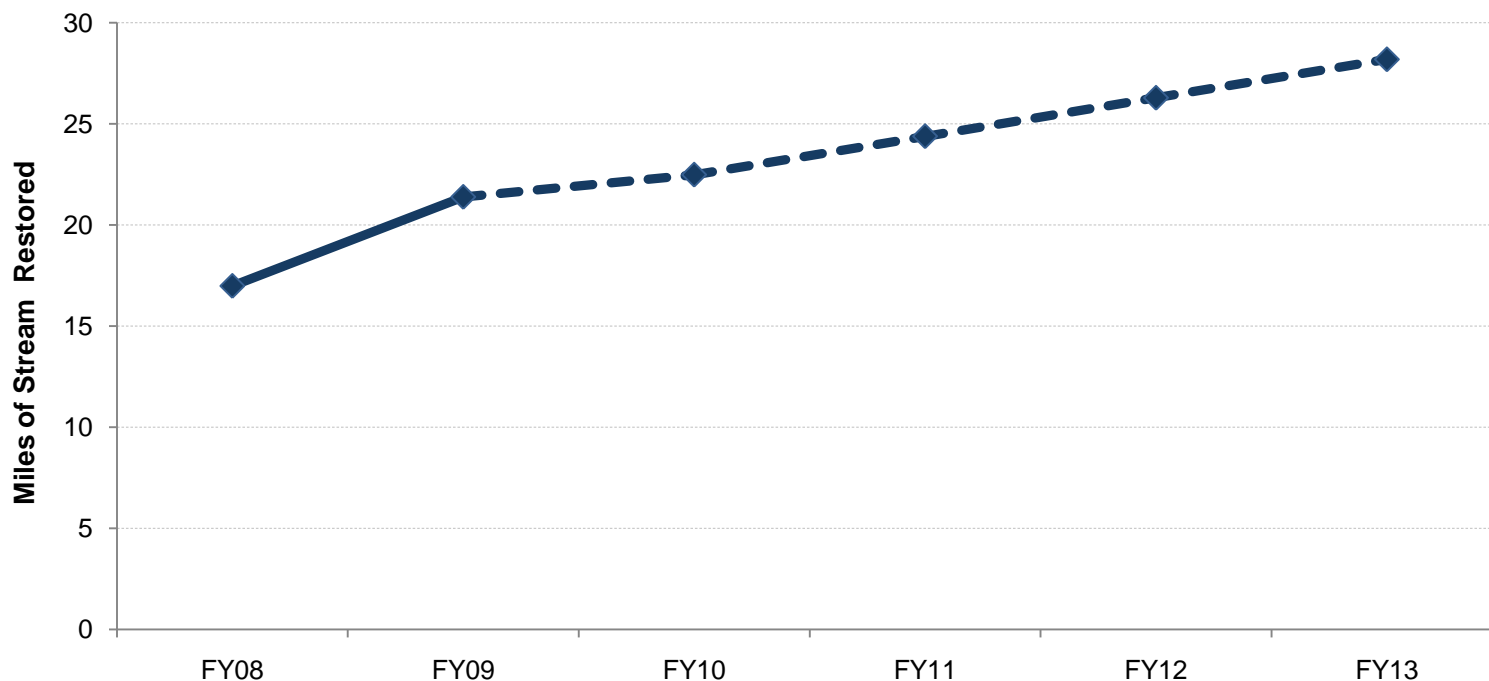


	FY08	FY09	FY10	FY11	FY12	FY13
Rainscape Participants	347	590	750	900	1,175	1,500
Impervious Acres Treated	0.8	1.9	6	13	23	35



Performance Context: Stream Miles Restored

Objective: Stream restoration reinforces the effectiveness of stormwater retrofits and helps to reduce pollutant loadings

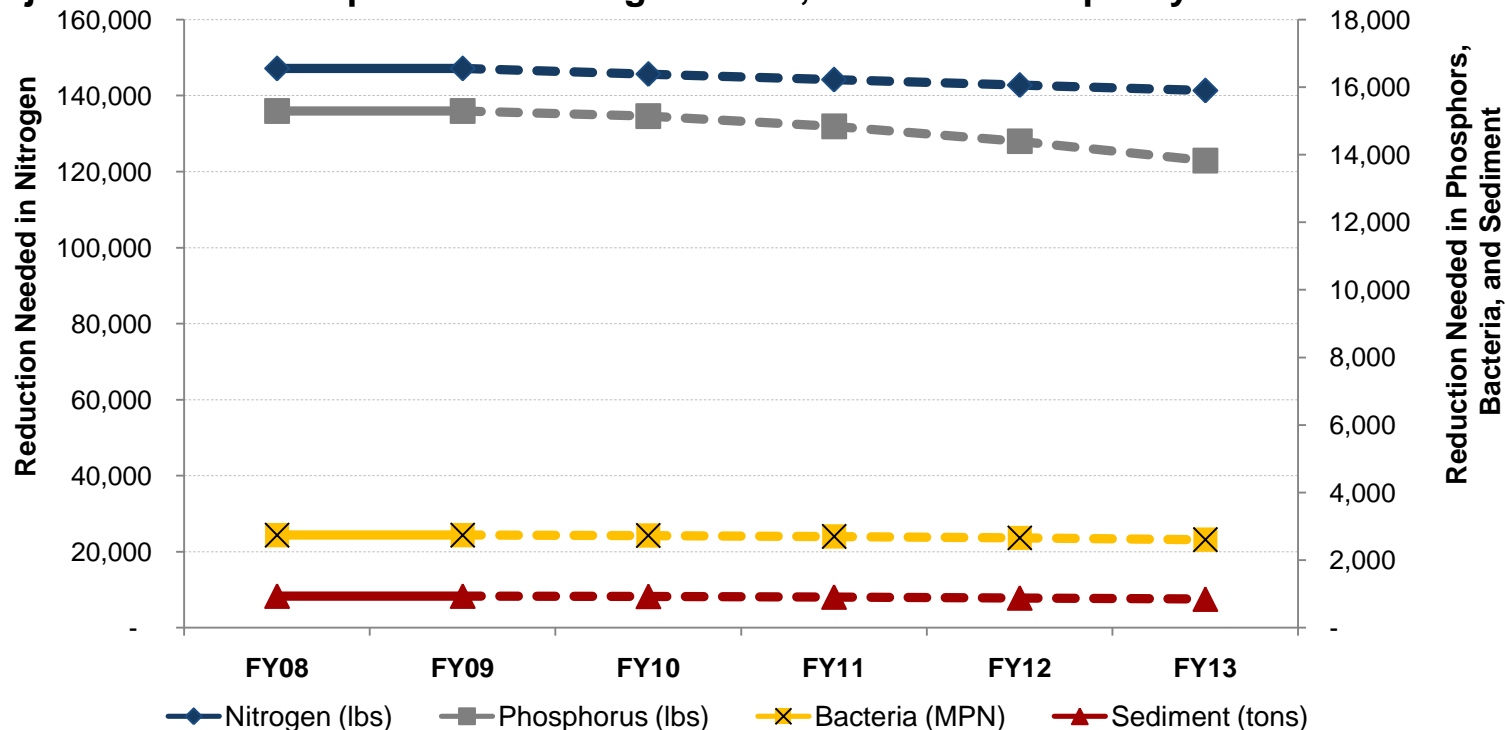


	FY08	FY09	FY10	FY11	FY12	FY13
Miles of Stream Restored	16.98	21.38	22.48	24.38	26.28	28.18



Headline Measure: Pollutant Load Reductions to Meet Water Quality Standards

Objective: To reduce pollutant loadings to zero, to meet water quality standards

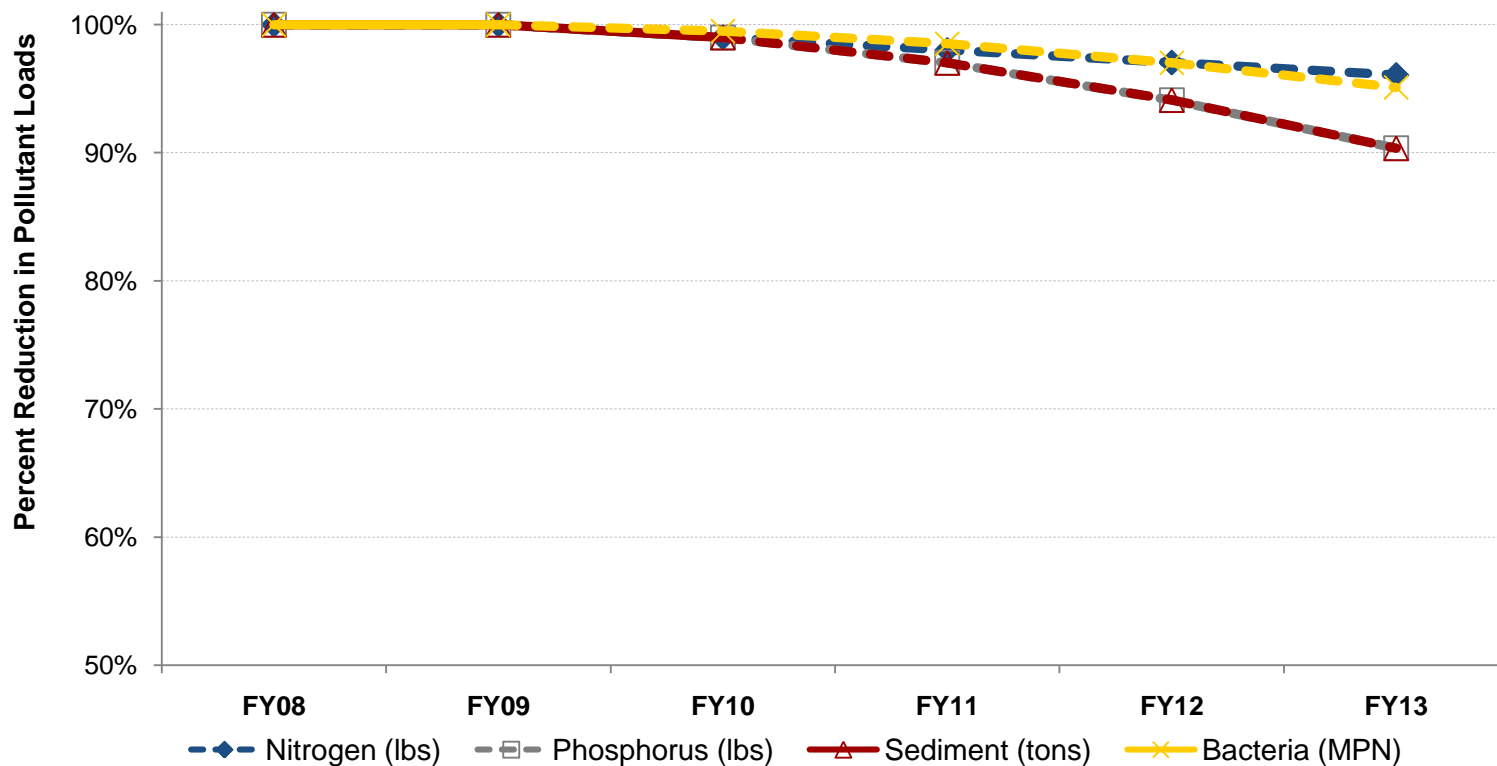


	FY08	FY09	FY10*	FY11*	FY12*	FY13*
Nitrogen (lbs)	147,174	147,174	145,702	144,245	142,803	141,375
Phosphorus (lbs)	15,301	15,301	15,148	14,997	14,847	14,698
Sediment (tons)	935	935	926	916	907	898
Bacteria (MPN)	2,738	2,738	2,711	2,684	2,657	2,630



Percent of Pollutant Load Reductions to Meet Water Quality Standards

Objective: To reduce pollutant loadings to zero, to meet water quality standards



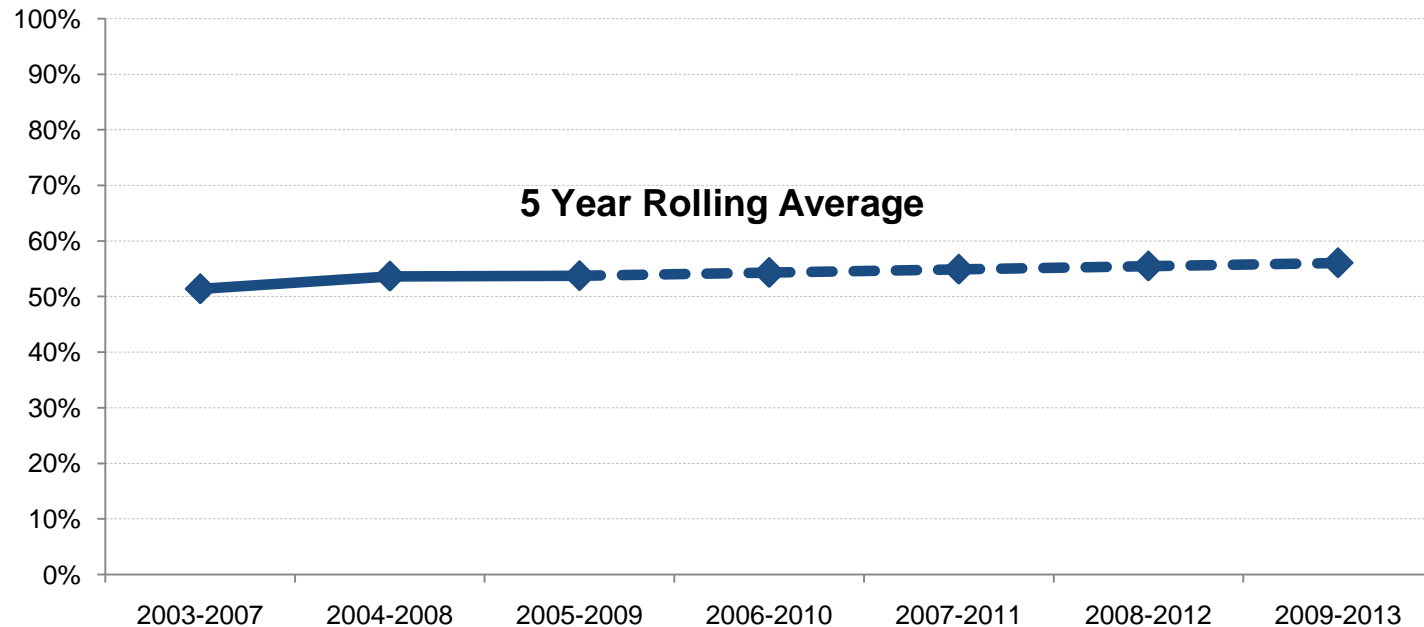
*Percent change in pollutant loads calculated using FY08 as the base.

The National Pollutant Discharge Elimination System (NPDES) requires the County to show progress in meeting Water Quality Standards.



Headline Measure: Countywide Index of Biological Integrity (IBI*) Score

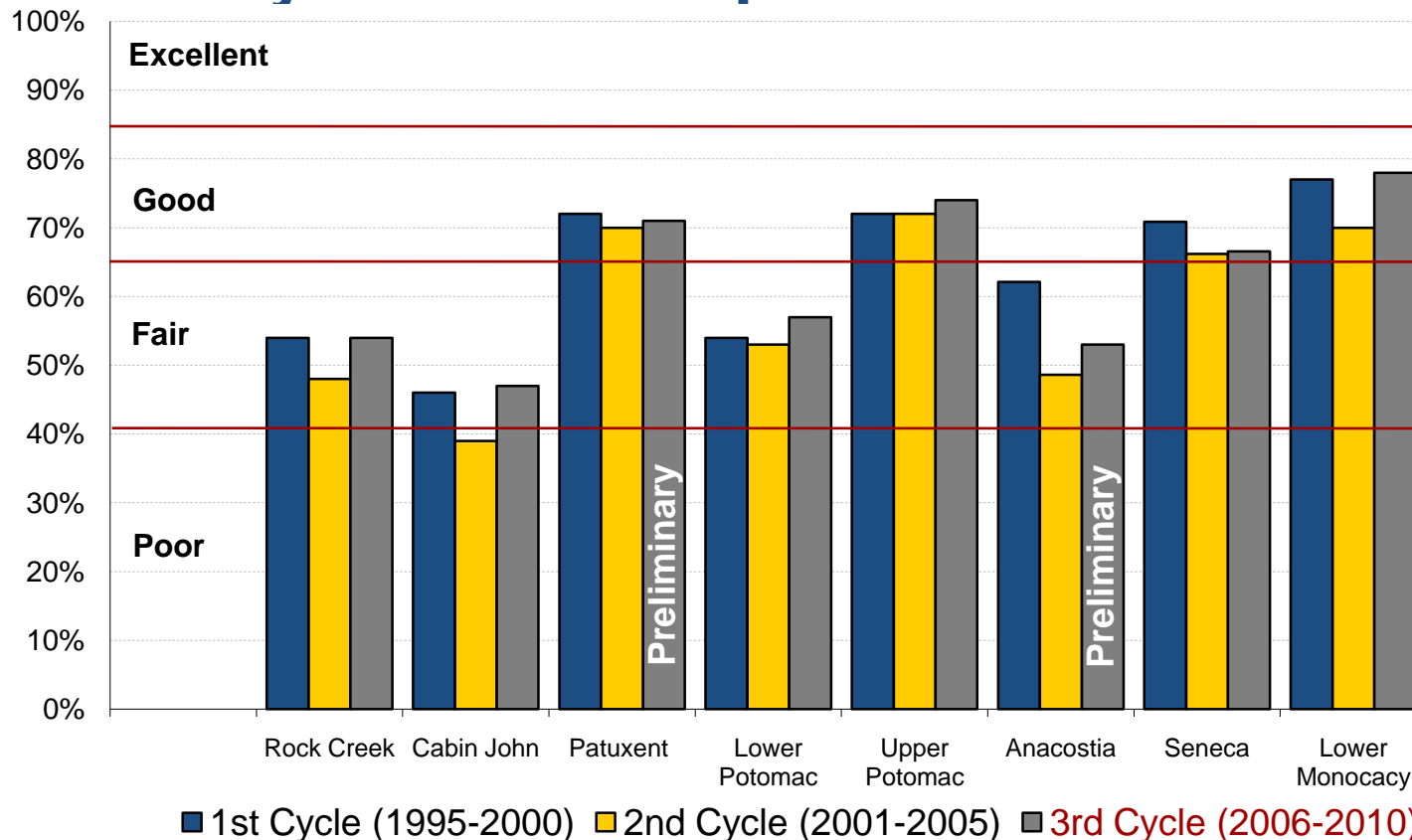
IBI Score - The Index of Biological Integrity is a combined score of the health of the fish and the macro-invertebrate biological communities.



	2003 – 2007	2004 – 2008	2005 – 2009	2006 – 2010	2007 – 2011	2008 – 2012	2009 – 2013
Rolling Average	51%	54%	54%	54%	55%	55%	56%



Headline Measure Detail: Index of Biological Integrity (IBI) Score In County Watershed Groups



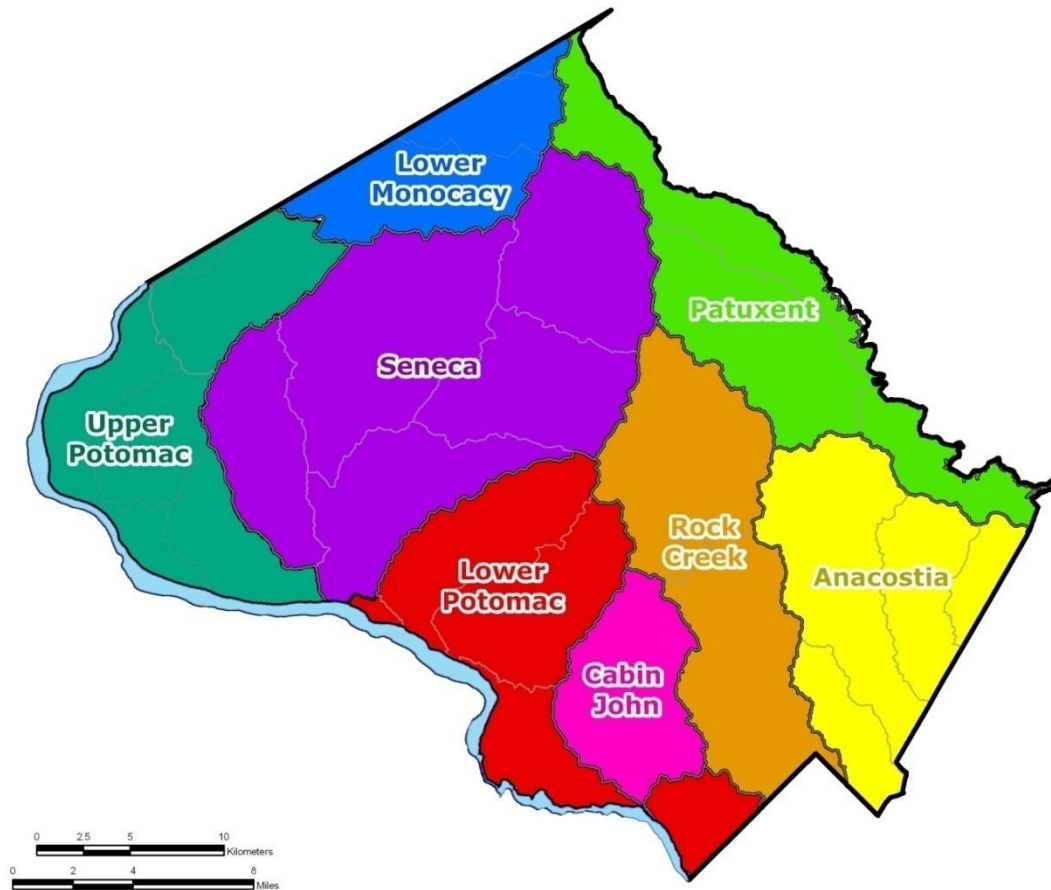
* IBI is a measure of the overall health (or integrity) of the biological communities in county streams.

Watershed Groups Correspond to the National Pollutant Discharge Elimination System (NPDES) MS4 Implementation Strategy Watershed Groups.



Headline Measure Detail: Index of Biological Integrity (IBI) Score In County Watershed Groups

Watershed Groupings for NPDES MS4 Implementation



Headline Measure Detail: Index of Biological Integrity (IBI) Score In County Watershed Groups

Percent of County Watersheds	Excellent	Good	Fair	Poor	Total
1995-2000	0%	50%	50%	0%	100%
2001-2005	0%	50%	38%	13%	100%
2006-2010	0%	50%	50%	0%	100%

* IBI is a measure of the overall health (or integrity) of the biological communities in county streams.
Note: Individual subwatersheds could have an IBI rating of poor (especially in southern County areas)

Biological monitoring is conducted in County Subwatersheds on a five-year cycle. It is recognized as a reliable assessment of water quality and waterbody health.



Causes and Solutions

Results of Data Analysis (1) What does the data tell us?	Causes (2) Based on the results of the analysis, why is this occurring in your department?	Solutions (3) What actions does your department plan to take to address the stated causes and change (or continue) these results?
<ul style="list-style-type: none"> Measure #1 & 2: Water quality has remained the same for the past two fiscal years, the projections show incremental improvements, with decreases in pollutant loading and improvements in biological conditions. 	<ul style="list-style-type: none"> Water quality improves incrementally. Pollutant loading is affected by numerous variables beyond DEP control including public behavior Stream restoration and stormwater retrofit projects are being completed These trends gloss over subwatersheds that continue to have poor IBI ratings 	<ul style="list-style-type: none"> DEP is currently preparing implementation plans to comply with the NPDES MS4 permit E.g. <ul style="list-style-type: none"> Region-wide trash reduction strategy through public education and outreach Street sweeping programs



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Policy and Compliance

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- Percent Satisfied with DEP Response to Environmental Complaints
- Residential and Non-Residential Building Energy Use (*New measure*)
- Indicator - Air Quality Measure: Number of Air Quality Action Days in the Year

Water and Sewer Policy

- Percent Concurrence of County Council Water and Sewer Service Actions with DEP Recommendations (*New measure*)

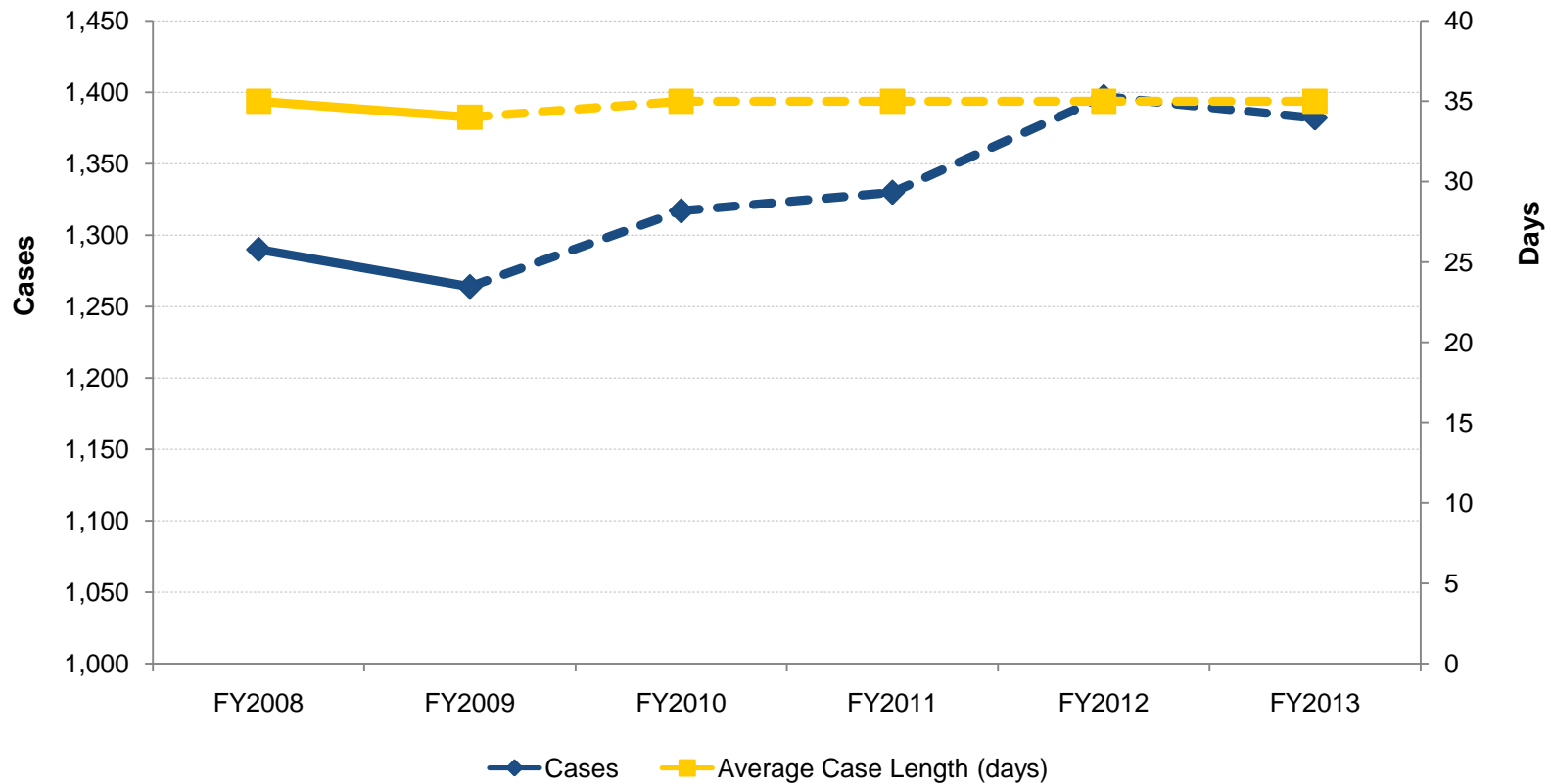
Solid Waste

- Percentage of Total Municipal Solid Waste Recycled
- Missed Collection Complaints per 10,000 Collections
- Percent of Landfill Space Not Utilized
- Single-Family Solid Waste Charges



Headline Measure: Average Number of Days to Resolve Incoming Complaints

Policy and Compliance – Average number of days to resolve a complaint from initial complaint intake to inspectors closing the case.



Performance Context: Policy and Compliance Workload

	FY08	FY09	FY10	FY11	FY12	FY13
# of Cases	1,290	1,264	1,316	1,330	1,396	1,381
# of Approved Positions	7	7	7	7	7	7
Cases per Position	184	181	188	190	200	197
Average Case Length (days)	35	34	35	35	35	35



Performance Context: Average Number of Days to Resolve Incoming Complaints by Case Type

	FY08		FY09		Percent Change		FY10		Percent Change	
Case Type	Cases	Average Case Length (days)	Cases	Average Case Length (days)	Cases	Average Case Length	Cases	Average Case Length (days)	Cases	Average Case Length
Ambient Air	193	36	190	42	-2%	14%	220	43	14%	2%
Hazmat	59	15	48	19	-23%	21%	51	22	6%	14%
Indoor Air/ Environment	98	46	142	38	31%	-21%	112	40	-27%	5%
Noise	246	44	247	46	0%	4%	251	45	2%	-2%
Solid Waste	380	34	385	29	1%	-17%	419	30	8%	3%
Stormwater	145	37	121	25	-20%	-48%	132	30	8%	17%
Water Quality	169	22	131	26	-29%	15%	132	25	1%	-4%
Grand Total	1,290	35	1,264	34	-2%	-2%	1,317	35	4%	2%

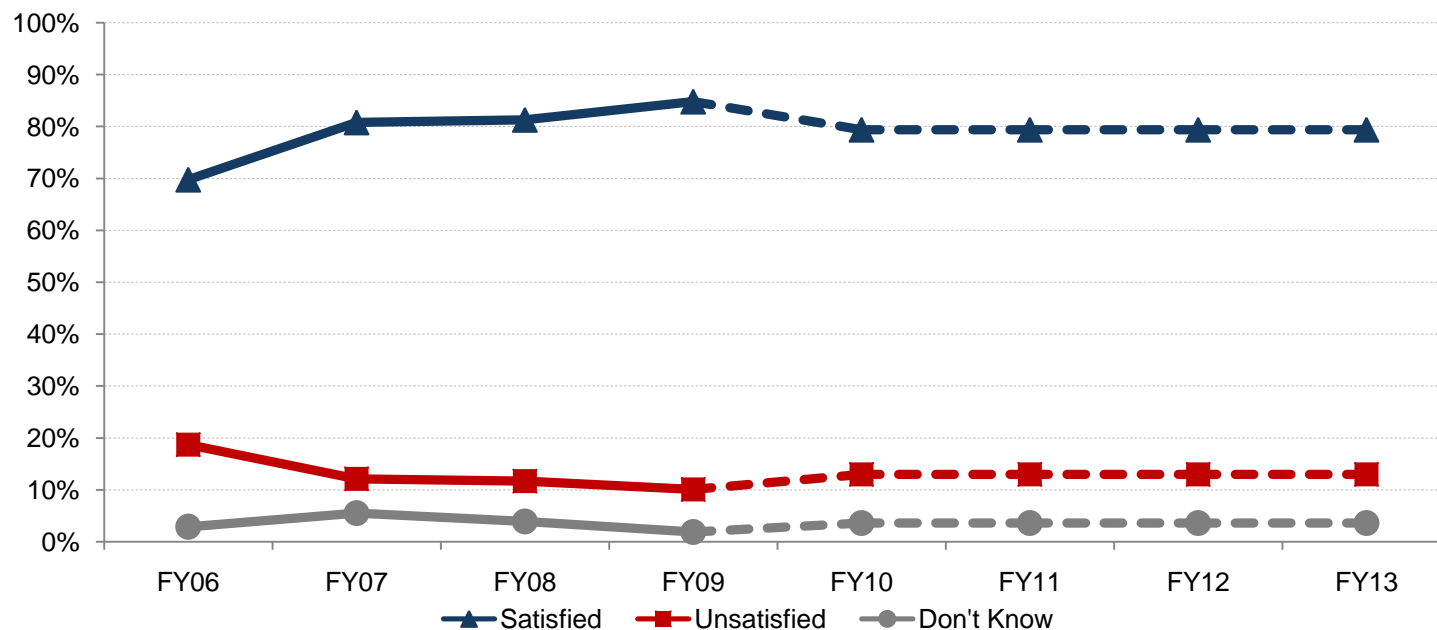
*The average number of days is calculated based on cases closed at the time the data is pulled from CaseBase, the average will differ based on recent case closures at the time of the data extract.

In FY09, though there was a 2% decline in the overall number of complaint cases, there was a 31% increase in the number of cases involving Indoor Air/Environment.



Headline Measure: Percent Satisfied with DEP Response to Environmental Complaints

Policy and Compliance – Percent of respondents satisfied with DEP's actions in resolving their code enforcement case.



	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Satisfied	69.8%	80.8%	81.3%	84.8%	79.4%	79.4%	79.4%	79.4%
Unsatisfied	18.7%	12.1%	11.7%	10.1%	13.0%	13.0%	13.0%	13.0%
Don't Know	2.9%	5.5%	3.9%	1.9%	3.6%	3.6%	3.6%	3.6%
No Response Chosen	8.6%	1.6%	3.1%	3.2%	4.0%	4.0%	4.0%	4.0%

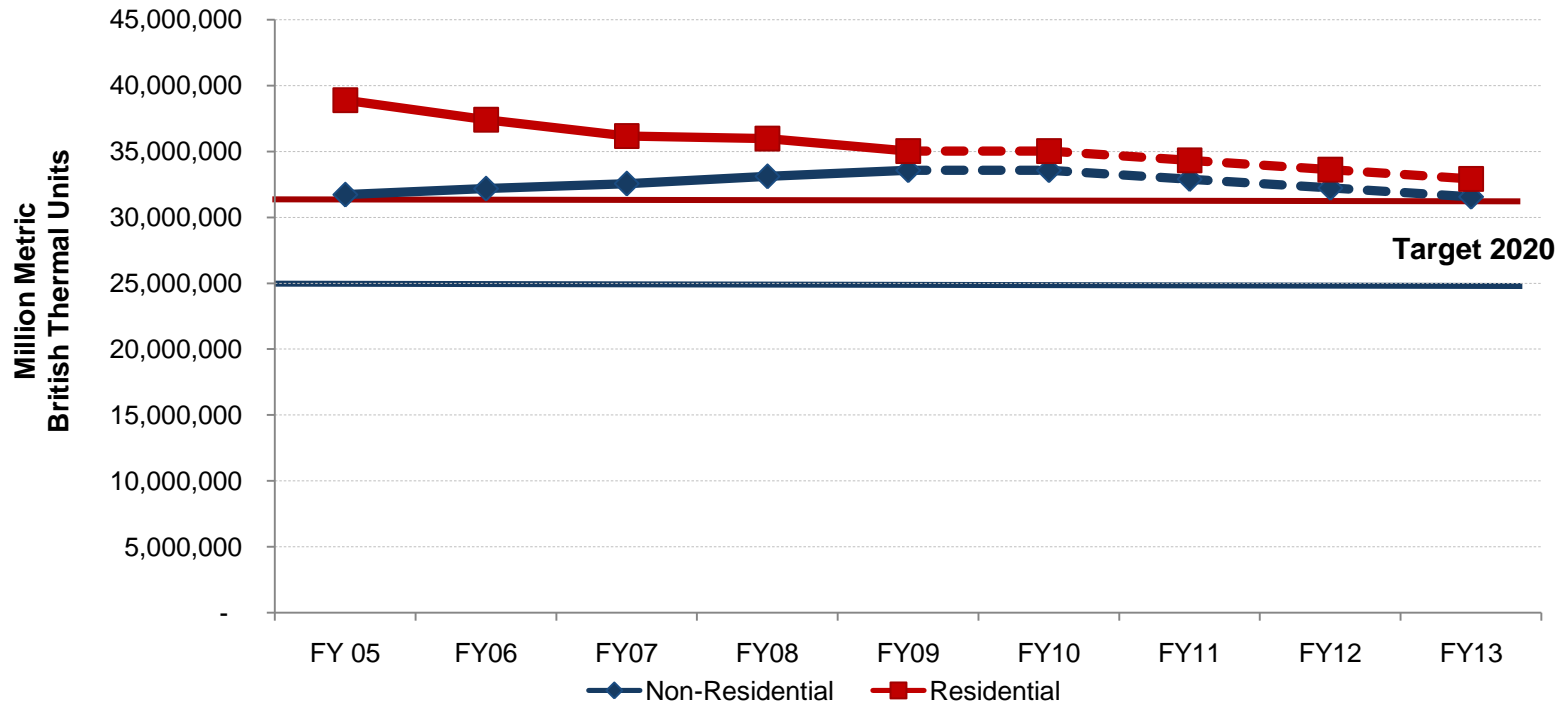


Causes and Solutions

Results of Data Analysis (1) What does the data tell us?	Causes (2) Based on the results of the analysis, why is this occurring in your department?	Solutions (3) What actions does your department plan to take to address the stated causes and change (or continue) these results?
<ul style="list-style-type: none"> Measure # 3: Noise, Ambient Air, and Indoor Air/ Environment cases take the longest amount of time to close. Average time to close a code enforcement case is expected to remain steady despite a projected rise in the number of cases per code enforcement position. 	<ul style="list-style-type: none"> Most complex cases Long-standing complaint against Meadowbrook Stables skews data Projections are based on average of previous years 	
<ul style="list-style-type: none"> Measure # 4: Despite an increase in customer satisfaction in FY09, DEP projects a decline in satisfaction in FY10. 	<ul style="list-style-type: none"> Projections for FY10-FY13 are based on an average of data from FY06-FY09 	



Headline Measure: Residential/Non-residential Energy Use as a Measure of Greenhouse Gas Reductions (New Measure)



	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	2020* Target
Non-Residential	31,715,213	32,169,926	32,553,612	33,101,269	33,563,287	33,563,287	32,892,022	32,220,756	31,549,490	25,372,170
Residential	38,880,724	37,391,906	36,164,942	35,979,624	35,012,591	35,012,591	34,312,340	33,612,088	32,911,836	31,104,579

*As per the Climate Action Plan, Carbon Emissions must be 20% of 2005 levels by 2020.



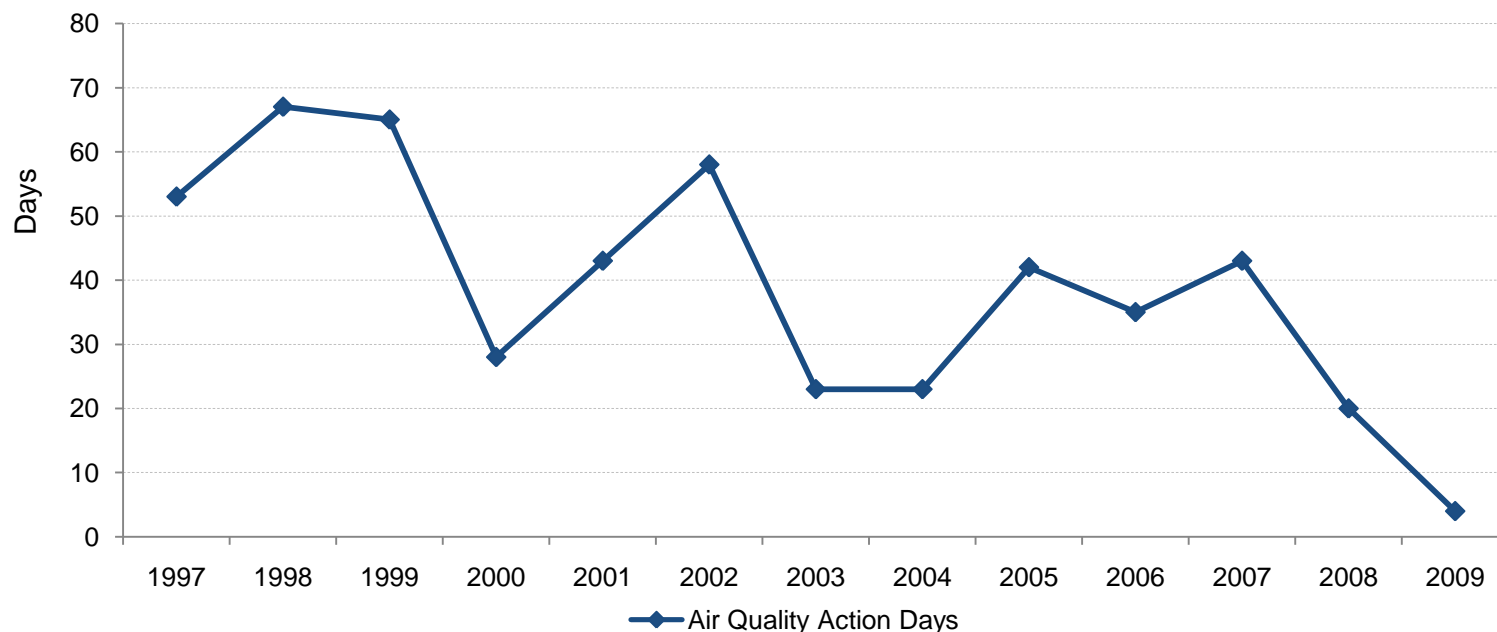
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<ul style="list-style-type: none">Measure # 5: Non-residential energy use increased while residential energy use decreased in FY09.	<ul style="list-style-type: none">Variation in weather. Relatively mild years in terms of degree days (both heating and cooling)Residential energy consumption responds relatively quickly to these changes while commercial is not as elasticFinancial pressure from rising energy rateEconomic issuesAwareness of energy conservation issues and new incentives	



Indicator: Number of Air Quality Action Days in the Year

An Air Quality Action Day is determined whenever any criteria air pollutant is predicted to approach unhealthy levels as determined by the National Ambient Air Quality Standards (NAAQS).



*The highest level of any National Ambient Air Quality Standard in the monitoring network determines the air quality index of the entire region, regardless of the location of the monitor.

Montgomery County is part of the Metropolitan Washington nonattainment area for the 2008 Ozone Standard (75 ppb). In this region Ozone is the dominant pollutant during the summer “Air Quality Action Day” season.



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<ul style="list-style-type: none"> Indicator: The number of Air Quality Action days have steadily declined over the past three years. 	<ul style="list-style-type: none"> Federal and State regulatory initiatives lower emissions. The County's Resource Recovery Facility reduces its oxides of nitrogen emissions by roughly 50%. Oxides of N contribute to Ozone. Use of clean energy by County County purchase of lower emission vehicles, (diesel, gasoline/electric hybrids and CNG) for administrative and transit bus fleet. Reduced heavy duty diesel emissions by actively retrofitting diesel on road and off road vehicles 	



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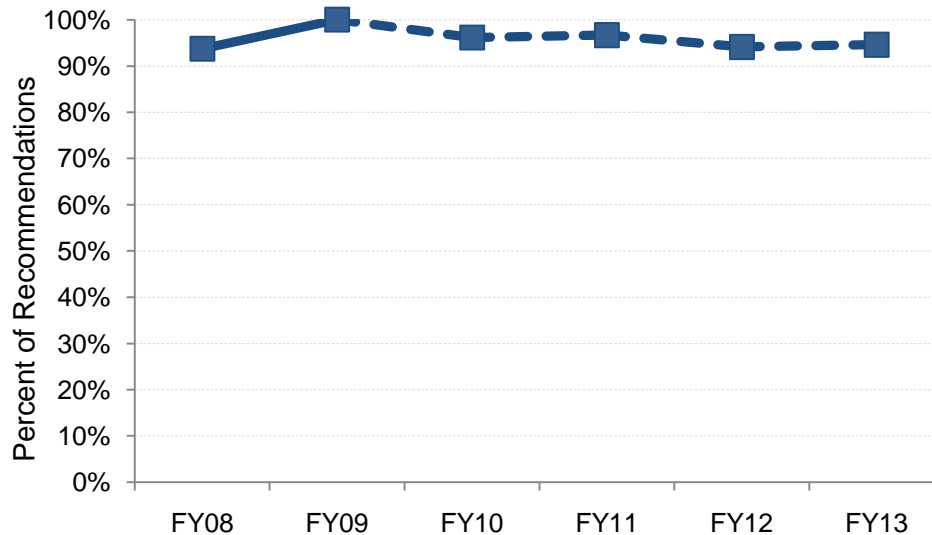
- Percent Concurrence of County Council Water and Sewer Service Actions with DEP Recommendations (*New measure*)

Solid Waste

- Percentage of Total Municipal Solid Waste Recycled
- Missed Collection Complaints per Week
- Percent of Landfill Space Not Utilized
- Single-Family Solid Waste Charges



Headline Measure: Percent of DEP Water and Sewer Service Action Recommendations Accepted by County Council *(New Measure)*



	Recommendations		
	Requests Received with Actions Completed	Requests with Final Decisions in Agreement with DEP	% Accepted
FY08	32	30	94%
FY09	17	17	100%
FY10	26	25	96%
FY11	30	29	97%
FY12	34	32	94%
FY13	37	35	95%

$$\% = \frac{\text{Requests received with DEP "actions" and recommendations completed}}{\text{Requests with completed actions where Council agrees with DEP's recommended action.}}$$

DEP prepares recommendations for the County Council on proposed changes to service area designations that affect a property's eligibility for public water and sewer service versus private wells and septic systems.



Causes and Solutions

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<ul style="list-style-type: none">Measure # 7: In FY09, all of DEP's recommended actions for sewer and water category changes were accepted.	<ul style="list-style-type: none">Council had no issues beyond what was provided in the staff reportLow number of applications due to economy	



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Performance Context: Maryland Recycling Rate (MRA) Material Recycling Tonnage

Jurisdiction	2004	2005	2006	2007	2008 DRAFT
Anne Arundel County	318,916	348,066	343,593	330,501	310,827
Baltimore County	456,264	681,039	724,484	1,213,331	1,055,888
Frederick County	102,818	112,323	119,069	127,752	106,728
Howard County	134,319	156,441	178,226	221,660	190,929
Prince George's County	299,292	301,001	320,217	324,214	304,971

*2008 totals have NOT been finalized by MDE and could change.

CountyStat tried to benchmark Montgomery County against other Maryland jurisdictions but there are large year-to-year fluctuations.



Performance Context: State Data Reporting Concerns

■ State Data Collection Process:

- All Maryland counties report recycling information to the State for inclusion in a yearly Solid Waste Diversion Report
- The Solid Waste Diversion Report is publicly available on the Maryland Department of the Environment website

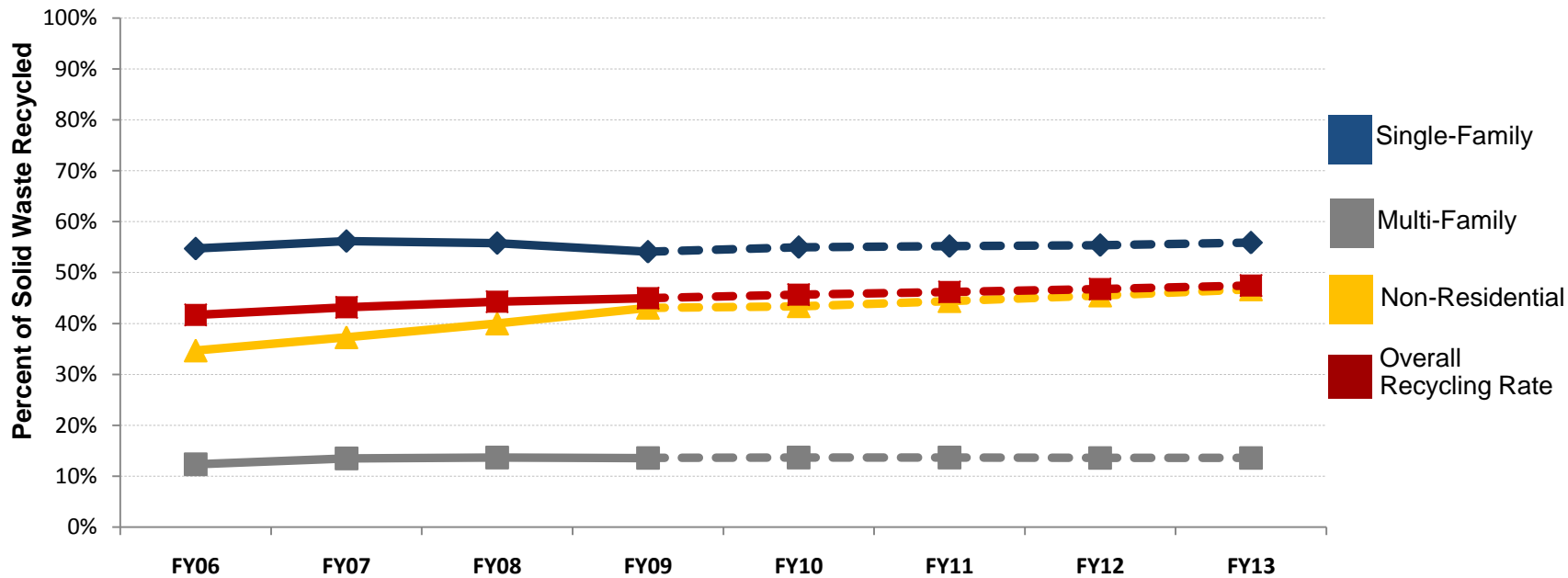
■ State Data Reporting Concerns:

- Data for other Maryland jurisdictions reported by the State has large year to year fluctuations
- Data appears out of alignment with jurisdiction populations and cannot be independently verified
- The State reported data for recycling in Montgomery County does not match the information the Solid Waste Division reports for the County

At this time CountyStat can not reliably benchmark Montgomery County against other jurisdictions.



Headline Measure: Percentage of Total Municipal Solid Waste Recycled



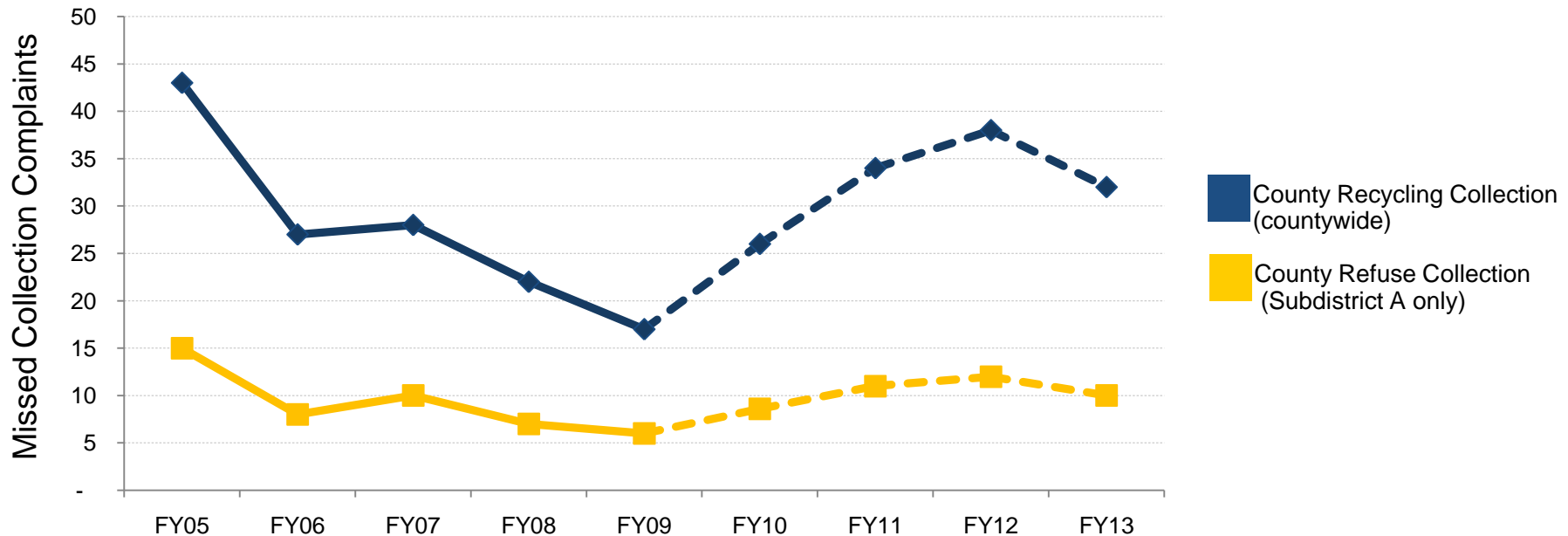
	FY 06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Single- Family	55%	56%	56%	54%	55%	55%	55%	56%
Multi-Family	12%	14%	14%	14%	14%	14%	14%	14%
Non-Residential	35%	37%	40%	40%	43%	44%	46%	47%
Overall Recycling Rate	42%	43%	44%	44%	46%	46%	47%	48%

The County Executive's goal is to recycle 50% of the solid waste stream by 2010.



Headline Measure: Missed Collection Complaints per Week

Missed Collection – Refuse or recycling is not picked up on the same day.

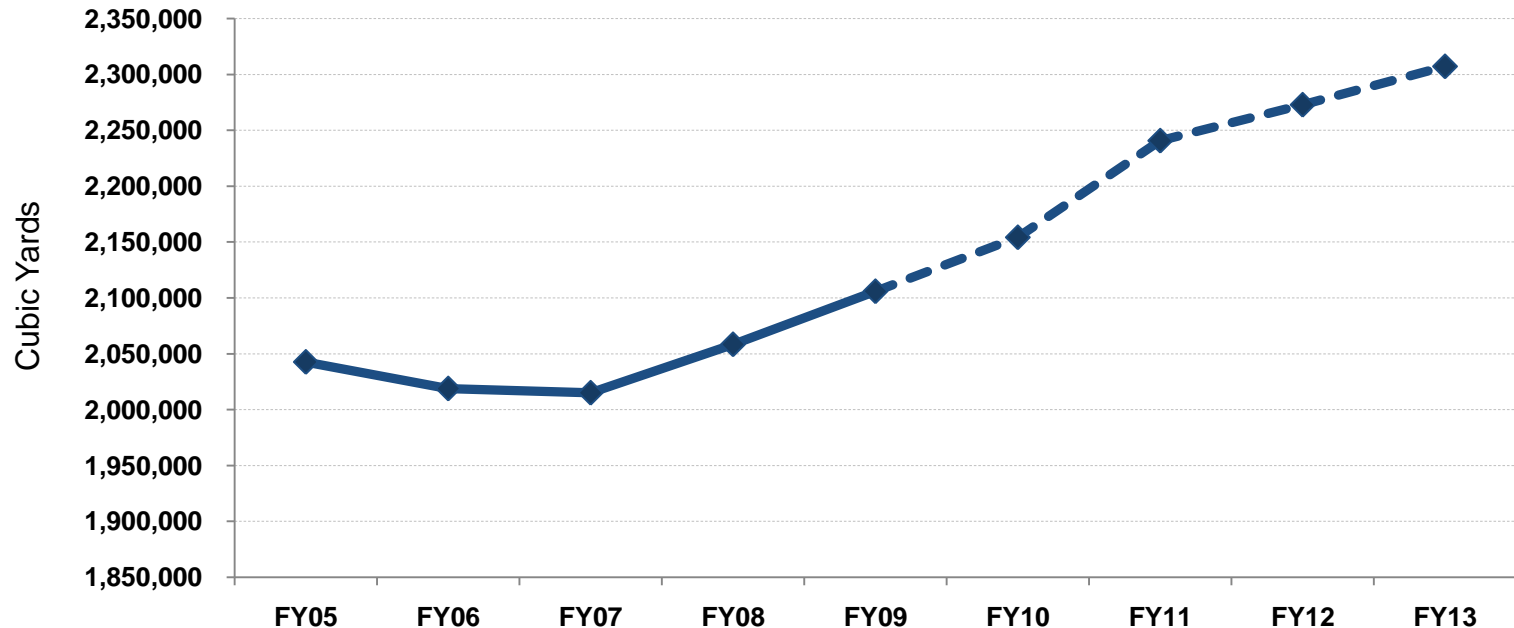


	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Missed Recycling Collections	43	27	28	22	17	26	34	38	32
Households Served (Recycling)	205,561	207,278	208,444	209,306	209,935	210,442	212,077	213,712	215,346
Missed Refuse Collection	15	8	10	7	6	9	11	12	10
Households Served (Refuse)	86,252	87,213	87,650	89,906	90,289	90,507	91,210	91,913	92,616



Headline Measure: Landfill Space Diverted from Use

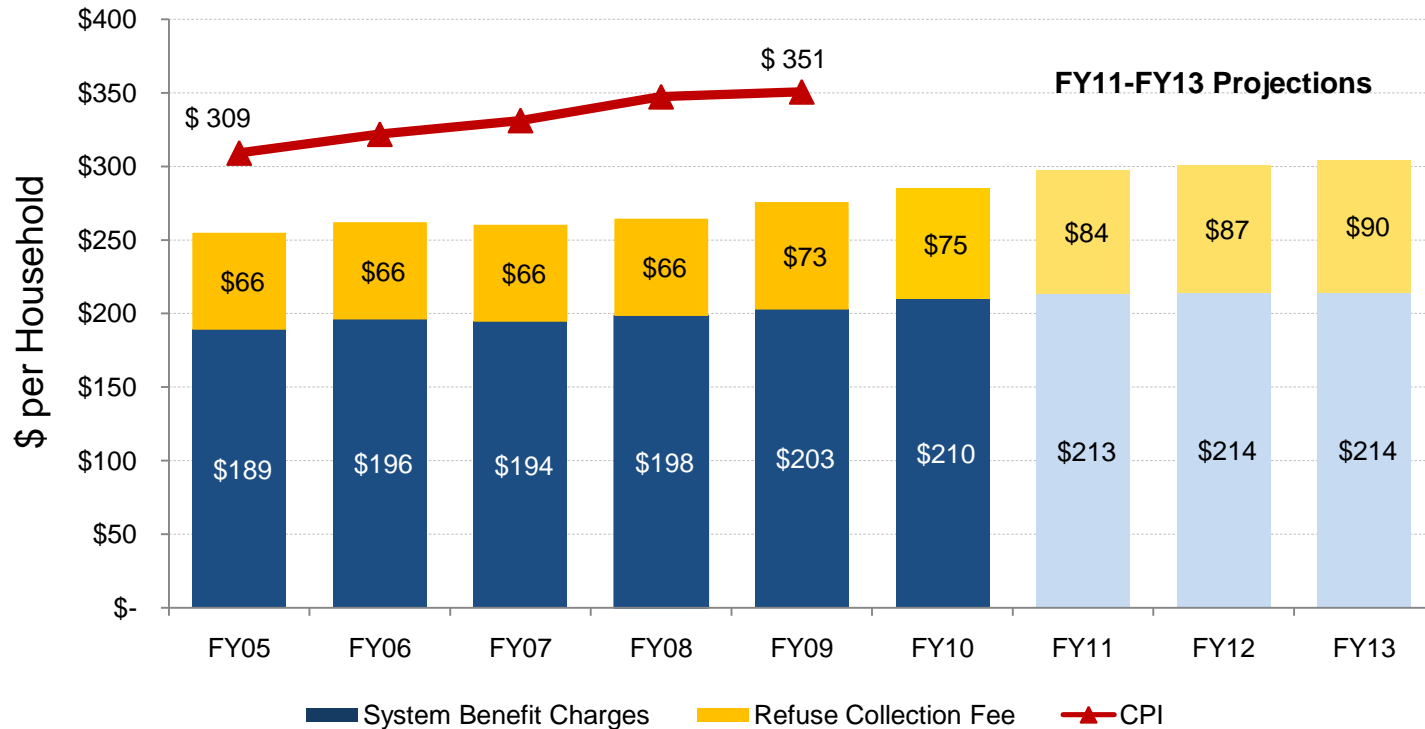
Solid Waste – Landfill space is diverted from use as a result of source reduction, recycling, grasscycling, and conversion of refuse to energy.



	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Landfill Space Diverted from Use	2,042,674	2,018,869	2,015,054	2,058,409	2,105,890	2,154,174	2,240,660	2,272,812	2,307,152



Headline Measure: Single-Family Solid Waste Charge



* CPI base year was FY99: \$261.90

System Benefit Charge – Charges assessed to improved properties that help cover the costs of basic programs and facilities to manage all County solid waste generation.

Refuse Collection Charge - County's cost to provide the refuse collection service / number of households projected to be receiving the service at mid-year.



Performance Context: Fees for Private Solid Waste Pick-Up



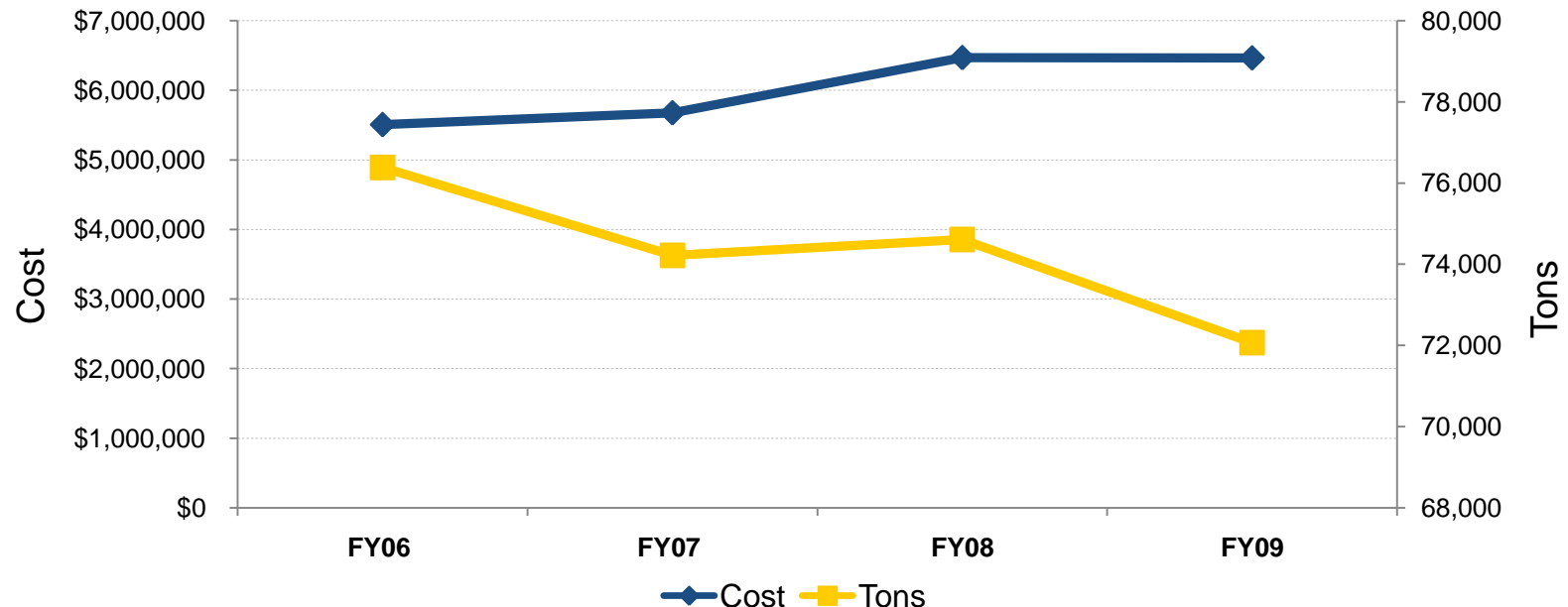
•Data is not available from private haulers for 2006 and 2009 information will be available in December.

The fees for private residential solid waste pick-up do not include any bulk pick-up charges. The County Refuse Collection Fee includes five bulk pick-ups per year.



Performance Context: Refuse Collection - County Cost per Ton

Refuse Collection - Solid waste management activities involved in providing curbside collection of waste set out for disposal from single-family homes in the County's Refuse Collection District.



	FY06	FY07	FY08	FY09
Cost	\$5,504,892	\$5,675,061	\$6,468,522	\$6,464,311
Tons	76,378	74,213	74,608	72,066
Cost per Ton	\$72.07	\$ 76.47	\$86.70	\$89.70
Net Operating	67.30	71.87	80.54	\$83.98



Causes and Solutions

Results of Data Analysis (1) What does the data tell us?	Causes (2) Based on the results of the analysis, why is this occurring in your department?	Solutions (3) What actions does your department plan to take to address the stated causes and change (or continue) these results?
<ul style="list-style-type: none"> Measure # 8: Single Family recycling declined in FY09. 	<ul style="list-style-type: none"> Current economic conditions have impacted the levels of spending and consumption of County residents. DSWS has seen decreases in the amount of trash thrown away, and the amount of recyclable materials put out for recycling. The amount of white goods, scrap metal, and mixed paper recycled have dropped significantly from 2008. 	<ul style="list-style-type: none"> DSWS plans to continue efforts to educate, train and enforce recycling, to ensure that as much recyclable material as possible is recycled, out of the total amount that is generated.
<ul style="list-style-type: none"> Measure # 9: Complaints for missed recycling collections is projected to increase. 	<ul style="list-style-type: none"> Due to the collection contracts expiring between 2010 and 2012, new contractors may be assigned to the 13 areas. We estimate an increase in missed collections due to the start-up of a new contractor. There are more missed collections for recycling because we service 210,000 customers versus 91,000 for refuse. 	<ul style="list-style-type: none"> The amount of misses will subside once the new contractor has experience with the route. We will continue to monitor the progress of the new contractor via field inspectors.



Causes and Solutions

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<ul style="list-style-type: none"> Measure # 10: The County has had a steady increase in the amount of landfill space that has diverted from use. 	<ul style="list-style-type: none"> Landfill space is diverted from use as a result of source reduction, recycling, grasscycling, and conversion of refuse to energy. 	<ul style="list-style-type: none"> DSWS will continue the current practice in order to preserve Landfill space.
<ul style="list-style-type: none"> Measure # 11: The County's Refuse collection fee increase by 10% in FY09. In FY08 the County's Refuse Collection Fee was 60% lower than the average amount charged by private haulers for households outside the collection area. 	<ul style="list-style-type: none"> The increase was due to increased expenditures for contractual services due to fuel adjustments and CPI. The Montgomery County charge for refuse collection reflects the advantage of economies of scale. Charges are set to cover costs. Private hauler fees to larger HOA's are very close to the County refuse collection fee. 	<ul style="list-style-type: none"> We closely monitor expenditures to stay within budgetary limits. Current policy is that rates are set such that year end retained earnings is between 10% - 15% of resources for the Collection Fund. Retained earnings provide coverage against fiscal risks such as break-in-service.



Tracking Our Progress

- **Meeting Goals:**
 - Determine the impact of DEP's work on headline measures and establish new performance expectations and goals

- **How will we measure success**
 - Department meets or exceeds projected performance



Wrap-Up

- **Follow-Up Items**
- **Performance Plan Updating**

